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AUTHOR:

Yakovleva, M. A.

TITLE: A programming system with macroinstructions

SOURCE: Akademiya nauk SSSR. Matematicheskiy institut. Trudy.
v. 66. Moscow, 1962. Raboty po avtomaticheskoy
programirovaniyu, chislennym metodam i funktsional'-
nomu analizu. 4-15

TEXT: The programming system described was set up by collaborators of
the Steklov Institute under the guidance of L. V. Kantorovich. Its
principal characteristics are as follows: (1) use of macroinstructions,
i.e., instructions that release a sequence of individual operations;
(2) introduction of operations referring to "sub-quantities", such as the
rows and columns of a matrix regarded as a quantity; (3) generalization
of the concept of formula, in a way which allows for the nature of the
quantities involved in using a formula. If, for instance, the summands
in an addition instruction are numbers, an ordinary addition is
performed, but if the summands are vectors, then a vector addition is

Card 1/2

A programming system with ...

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carried out. These properties make it possible to use the system for a
concise programming of algorithms involved in solving systems of linear
equations, in certain difference methods, and in analytic transformations.
No reference is made to any particular computer.

Card 2/2